

Title (en)  
THERMOELECTRIC SOLAR PLANT

Title (de)  
THERMOELEKTRISCHE SOLARANLAGE

Title (fr)  
CENTRALE THERMOELECTRIQUE SOLAIRE

Publication  
**EP 1878983 A1 20080116 (EN)**

Application  
**EP 05808170 A 20051021**

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• ES 200501211 A 20050506

Abstract (en)  
The invention relates to a thermoelectric solar plant consisting in modules comprising parabolic mirrors (1) having a diameter of between 0 and 100 metres, which are supported by a solar tank (3) containing an aqueous solution of MgCl<sub>2</sub> (2). The inventive system employs solar energy reflection and refraction in order to produce onther types of energy cleanly. According to the invention, each mirror comprises: a mobile system (8), which tilts the mirror by a solid angle of 30° towards the east and west; and a tower or shaft (6) with a height of between 0 and 100 metres, the top of which is equipped with a graphite spheroid (7) which is covered with zirconium carbide and at which the energy is converted in order to be conveyed by other fluids (water, gas, etc.). The aforementioned spheroid contains a Fresnel lens for obtaining a large concentration of luminous energy which is used to produce pure silicon by means of evaporation thereof. Radiation energy is used to obtain electrical power. The energy captured is conveyed using high-strength steel pipes which extend through the shaft (6). The excess energy is stored in the dissolution of the solar tank (2) in order later to be transformed into electrical power, hydrogen, drinking water, fuels and derivatives of nitrogen, thereby rendering the elctrical power, drinking water and chemical industry sectors independent of each other.

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